

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PAUL W. DENT

Appeal No. 1999-1516
Application 08/263,835

ON BRIEF

Before THOMAS, KRASS and DIXON, Administrative Patent Judges.

THOMAS, Administrative Patent Judge.

DECISION ON APPEAL

Appellant has appealed to the Board from the examiner's final rejection of claims 1-8, 15 and 16, which constitute all the claims in the application.

Claim 16 is reproduced below:

16. A method of providing radio communication service to a plurality of subscriber terminals comprising the steps of:

launching a satellite into geostationary orbit at a first altitude and launching at least one satellite into non-geostationary orbit at a second altitude lower than said first altitude,

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wherein the satellite in geostationary orbit provides radio communication service to at least one of the subscriber terminals during a period that said subscriber terminal cannot access the at least one satellite in non-geostationary orbit.

The following references are relied on by the examiner:

Grant et al. (Grant)	5,119,225	June 2, 1992
Weinberg	5,589,834	Dec. 31, 1996 (filing date Apr. 22, 1994)
Rouffet et al. (Rouffet)	5,625,867	Apr. 29, 1997 (filing date Sept. 30, 1992)

Ballard, "Rosette Constellations of Earth Satellites," IEEE Transactions on Aerospace and Electronic Systems, Vol. AES-16, No. 5, pp. 656-673 (Sept. 1980).

Claims 1-8, 15 and 16 stand rejected under 35 U.S.C. §103. As evidence of obviousness, the examiner relies upon Rouffet in view Grant as to claim 16. To this combination the examiner adds Weinberg as to claims 1-3, 5, 6 and 15, with the further addition of Ballard as to claims 4, 7 and 8.¹

Rather than repeat the positions of the appellant and the examiner, reference is made to the brief and the answer for the details thereof.

¹ The examiner's concerns raised under 37 CFR §1.75(c) as to claim 5 are petitionable and not appealable.

OPINION

We reverse all rejections of the claims on appeal.

Turning first to the rejection of claim 16, we conclude that the wherein clause noted above in our reproduction of claim 16 earlier in this opinion cannot be met by the proposed combination of Rouffet and Grant even if they are properly combinable within 35 U.S.C. §103.

Grant encompasses the launching of a geostationary orbit first satellite and at least one satellite into a non-geostationary orbit at a second altitude lower than the first altitude by the showings of the GEO satellite and the LEO or lower earth satellites. As the examiner's statement of the rejection notes, Rouffet teaches only low earth orbit satellites, LEO satellites, which may communicate among themselves in passing off or handing off communications to earth stations or terminals on the earth. Rouffet does not disclose the use of any satellites in a geostationary orbit.

On the other hand, while Rouffet provides communications between each of the satellites shown in the figures in connection stations 12 and terminals 13, Grant only communicates by means of the geosatellite to the ground station GS in Figure 1. The

separate LEO satellites in this figure only communicate with the geosatellite and not with any ground station or ground terminal.

A careful reading of the wherein clause of claim 16 requires first that the geostationary satellite and the satellite in non-geostationary orbit both communicate individually to the claimed subscriber terminals, in addition to the special conditions recited therein that the geostationary satellite provides radio communication service to at least one of the subscriber terminals during a period that the subscriber terminal cannot access via at least one non-geostationary orbit satellite. These conditions cannot be met according to the teachings and showings and suggestions provided by the communication of Rouffet and Grant as proposed by the examiner.

As appellant observes at page 5 of the brief "[m]erely because Grant shows satellites orbiting at two different altitudes, the deficiencies of Rouffet are not remedied." We also are in agreement with appellant's observations at page 6 of the brief that "neither Grant nor Rouffet suggest handing off communications to a satellite that is in a higher orbit. Instead, Rouffet hands off only to a satellite orbiting at the same altitude and, Grant relates inter-satellite communication wherein the concept of handoff, as it applies to selecting an appropriate server for subscriber terminals, has no meaningful application."

The examiner's reliance upon the handing off teachings at columns 5 and 6 of Rouffet are misplaced because the discussion there relating to the decision to hand off depending on the availability of a satellite having a better elevation or a higher orbit is all within the context of low earth orbit satellites only. Taken in conjunction with Grant, we do not see that the artisan would have found such a teaching as suggesting the ability to hand off between the LEO satellites of Grant to a GEO satellite or vice-versa as proposed by the examiner. As indicated earlier, the ground station in Grant always communicates with the GEO satellite and the LEO satellites always communicate with the GEO satellite. There is no separate communication in Grant between the LEO satellites and the ground station to suggest a handing off operation within Grant itself such that the examiner's proposal would have merit.

Since we reversed the rejection of claim 16 under 35 U.S.C. § 103, we also reverse the additional two stated rejections of the remaining claims on appeal further in view of Weinberg and Ballard. These latter rejections must be reversed even though independent claims 1, 2, and 7 on appeal more specifically recite the use of medium earth orbit or MEO satellites. Weinberg and Ballard are thus not seen to cure the basic deficiencies provided by the combination of Rouffet and Grant.

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In view of the foregoing, the decision of the examiner rejecting claims 1-8, 15 and
16 under 35 U.S.C. § 103 is reversed.

REVERSED

James D. Thomas
Administrative Patent Judge

Errol A. Krass
Administrative Patent Judge

Joseph L. Dixon
Administrative Patent Judge

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